



Express Mail Label No. EV263873875US

PATENT
24-NS-6042

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Choe et al. :
Serial No.: 10/065,772 : Art Unit: 3641
Filed: November 18, 2002 : Examiner: J. Richardson
For: APPARATUS AND METHODS FOR :
OPTIMIZING REACTOR CORE :
COOLANT FLOW DISTRIBUTION :

Commissioner for Patents
Washington, D.C. 20231

AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application.

STATUS

2. Applicant is

___ a small entity. A verified statement:
___ is attached.
___ was already filed.
☒ other than a small entity.

RECEIVED
JAN 28 2003
GROUP 3600

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. 1.8a)

I hereby certify that this correspondence is, on the date shown below, being:

MAILING
___ deposited with the United States Postal Service
with sufficient postage as first class mail, in an
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Patents, Washington, D.C. 20231

FACSIMILE
___ transmitted by facsimile to the Patent and
Trademark Office

Date: _____

Michael Tersillo, Reg. No. 42,180

EXTENSION OF TERM

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

(complete (a) or (b), as applicable)

- (a) ___ Applicant petitions for an extension of time under 37 C.F.R. 1.136

(Fees: 37 C.F.R. 1.17(a)(1-5) for the total number of months checked below:)

Extension (months)	Fee for other than small entity	Fee for small entity
___ one month	\$ 110.00	\$ 55.00
___ two months	\$ 390.00	\$ 195.00
___ three months	\$ 890.00	\$ 445.00
___ four months	\$ 1,390.00	\$ 695.00

Fee: \$ _____

If an additional extension of time is required, please consider this a petition therefor.

(Check and complete the next item, if applicable)

___ An extension of _____ months has already been secured. The fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ _____.

OR

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

FEE FOR CLAIMS

4. The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

(Col. 1)		(Col. 2)		(Col. 3)		SMALL ENTITY	OTHER THAN A SMALL ENTITY
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSL Y PAID FOR		PRESENT EXTRA		ADDITIONAL RATE FEE	OR ADDITIONAL RATE FEE
TOTAL		MINUS	*	=		x \$9 = \$	x \$18 = \$
INDEP.		MINUS	**	=		x \$40 = \$	x \$80 = \$
___ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM						+ \$135 = \$	+ \$270 = \$
						TOTAL ADDIT. FEE \$	or TOTAL ADDIT. FEE \$

- (c)
- ☒
- No additional fee for Claims is required.

OR

- (d) _____ Total additional fee for claims required \$ _____

FEE PAYMENT

5. _____ Attached is a check in the sum of \$ _____.

_____ Charge Deposit Account No. 01-2384 the sum of \$ _____
A duplicate of this transmittal is attached.

FEE DEFICIENCY

- 6.
- ☒
- If any additional extension and/or fee is required, charge Deposit Account No. 01-2384.

AND/OR

- ☒
- If any additional fee for claims is required, charge Deposit Account No. 01-2384.



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01-24-23

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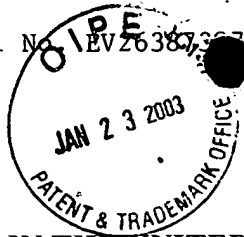
For: APPARATUS AND METHODS FOR
OPTIMIZING REACTOR CORE
COOLANT FLOW DISTRIBUTION: Art Unit: 3641
: Examiner: J. RichardsonRECEIVED
JAN 28 2003
GROUP 3000CERTIFICATE OF MAILING BY EXPRESS MAIL TO
THE COMMISSIONER OF PATENTS AND TRADEMARKSExpress Mail mailing label number: EV263873875USDate of Mailing: January 23, 2003

I certify that the attached including:

- Amendment (3 pgs.), in response to Office Action dated January 9, 2003
- Amendment Transmittal Form (3 pgs.)(in duplicate)
- Return post card

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above in an envelope addressed to the Commissioner for Patents, Washington, D. C. 20231.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Choe et al.

Art Unit: 3641

Serial No.: 10/065,772

Examiner: J. Richardson

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For: APPARATUS AND MEETHODS FOR
OPTIMIZING REACTOR CORE
COOLANT FLOW DISTRIBUTION

AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

In response to the Office Action dated January 9, 2003 Applicants, with traverse, elect for prosecution in this application all claims that belong to Group I, i.e., Claims 1-22.

The requirement for election is traversed because the inventions set out by the claims in Groups I and II clearly are related. Applicants submit that a thorough search and examination of either Group would be relevant to the examination of the other Group and would not be a serious burden on the Examiner. Additionally, requirements for election are not mandatory under 35 U.S.C.

Further, Applicants submit that that Office Action has not shown that the Claims of Group I are patentably distinct from the Claims of Group II. Particularly, the Office Action has not shown that either (1) the process as claimed can be practiced by another materially different apparatus, or (2) that the apparatus as claimed can be used to practice another materially different process as required by MPEP § 806.05(e). Particularly, the Office Action suggests that "the process as claimed can be practiced by another materially different apparatus, such as a reactor

coolant recirculation means comprising motorized recirculation pumps located external to the reactor pressure vessel, and variable numbers of jet pumps located internal to the reactor vessel". Applicants respectfully submit that the Office has not shown how motorized recirculation pumps located external to the reactor pressure vessel and variable numbers of jet pumps located internal to the reactor vessel can practice the claimed method.

Specifically, Group II Claim 23 recites a reactor core comprising a plurality of fuel assemblies arranged into at least three regions, and the steps of adjusting the coolant flow through the fuel assemblies in a particular region to be the same; and adjusting the coolant flow through the fuel assemblies so that the flow through the fuel assemblies in each region is different from the coolant flow through the fuel assemblies in each other region. Applicants submit that motorized recirculation pumps located external to the reactor pressure vessel and variable numbers of jet pumps located internal to the reactor vessel cannot practice the method recited in Claim 23. Particularly, motorized recirculation pumps located external to the reactor pressure vessel and variable numbers of jet pumps located internal to the reactor vessel cannot adjust the coolant flow through the fuel assemblies in a particular region to be the same, and cannot adjust the coolant flow through the fuel assemblies so that the flow through the fuel assemblies in each region is different from the coolant flow through the fuel assemblies in each other region. Accordingly, Applicants submit that the restriction requirement is improper and reconsideration of the election requirement is requested.

Further, Applicants elect, with traverse, species S shown in Figure 4 for examination. Applicants respectfully submit that Claims 1-27 are readable upon species S.

Applicants submit that the embodiment labeled Species R is not an embodiment of the present invention and that there are no claims in the application that read on Species R.

The requirement for election is traversed because the species S and T clearly are related. Applicants respectfully submit that independent Claims 1, 13, 18 and 23 are generic and are readable on species S and T. Applicant also submits that a thorough search and examination of species S would be relevant to the examination of species T, and would not be a serious burden on the examiner. Additionally, requirements for election are not mandatory under 35 U.S.C. Accordingly, reconsideration of the election requirement is requested.

Respectfully submitted,

A handwritten signature in cursive script, reading "Michael Tersillo". The signature is written in black ink and is positioned above a horizontal line.

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